

ABSTRACT OF THE DISCLOSURE

A heat exchanger integrated into the transmission oil pan transfers heat from post-catalyst exhaust gases to the transmission oil. Inlet and outlet ducts route exhaust gas between the heat exchanger and an exhaust pipe located downstream of the catalyst. The exhaust pipe accommodates a control valve that diverts exhaust gas flow to the heat exchanger during the warm-up phase, or to the tailpipe during steady state operation. A control function is provided to monitor transmission oil temperature and engine operating conditions and to control actuation of the valve. The main input parameter to the control function is the transmission oil temperature.

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